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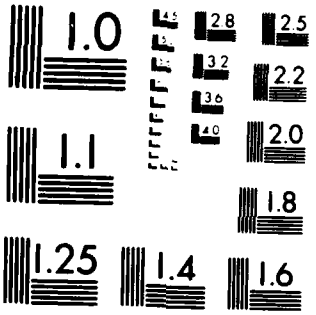

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THE HELIOGRAPH, A Bibliography

by

Lester L. Miller, Jr.

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This [illegible] presents materials written on the subject of heliographs. First invented during the 1814-1826 period, the land communications procedure is now in use for solar and satellite communications means. Materials have been selected from the holdings of the Morris Swett Technical Library, USAFAS.

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FOREWORD

This entry in the Morris Swett Library, USAFAS Special Bibliography series presents literary citations held in the collection on the heliograph. The name, from the Greek, means literally, "to write with solar rays," after the photographic process developed by J. Nicephore Niepce (1765-1833), and others during the 1814-1826 period. Sir Henry C. Mance (1840-1926) invented an instrument for communicating with mirrors by using an external light source in 1875 while he was assigned to duties with the Persian Gulf Telegraph Department. This development was successfully used in both the Second Afghan and Boer Wars. The invention refined procedures pioneered by Ameriacan Indians in the Southwest.

The first US military use was made following tests conducted at Fort Whipple, VA (Fort Meyer) during August, 1877, in artillery and general signal communications work in the Southwest and in Cuba. The compelling features of rapidity, secrecy, ease of use, and low cost have been applied and the heliograph is now used in radio and spectro-heliography for solar study and satellite communication applications.

This bibliography is arranged in parts, per the following table of contents. Featured in Part One are citations to a series of nine undated pamphlets selected from our rare books collection. They were published by the Carl Zeiss Optical Works or Jena (East), Germany in about 1910 and were based on the collaborative work of the company's namesake (1816-1888) with the technical staff of the University of Jena.

Inclusion of an item, or omission, neither implies USAFAS indorsement or sanction of the compiler's point-of-view. Comment regarding entries in the series is invited.

LESTER L. MILLER, Jr.
Supervisor/Reference Librarian

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PART 1 - BOOKS AND DOCUMENTS

Library of Congress Call #	Entry
UJ200.22 H323 RARE	Carl Zeiss Optical Works. 3¼-Inch and 4-Inch Triple Mirror-Signalling Apparatus, Reference #T93, Jena, Germany: The Co., (22p)
UJ200.22 H323	_____. 3¼-Inch, 5-Inch, and 6½-Heliographs, Reference #: T105, Jena, Germany: the Co., (3op).
UJ200.22 H323 RARE	_____. 7½-Inch Field Blink Light Apparatus, Reference #: T95, Jena, Germany: the Co., (30p).
UJ200.22 H323 RARE	_____. 10-Inch A.O. (Acetylene-Oxygen) Projector. Reference #: T138, Jena, Germany: the Co., (32p).
UJ200.22 H323 RARE	_____. The 10-Inch Heliograph, Reference #: T98, Jena, Germany: the Co., (22p).
UJ200.22 H323 RARE	_____. The 10-Inch Signalling Apparatus, Reference #: T91, Jena, Germany: the Co., (22p).
UJ200.22 H323 RARE	_____. 10-Inch Mirror Signalling Apparatus With Oxygen Generating Cartridges, Reference #: T92, Jena, Germany: the Co., (37p).
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UJ200.22 H3F6 RARE An Improved Method in the Art of Signalling for Military and Scientific Purposes, One Instrument for Both Day and Night Work, Finley's Heliotrope or New Helio-Telegraph Manufactured by the American Helio-Telegraph and Signal Light Company, Washington, D.C: the Co, 1887. (32p).

UJ200 A3 1910 War Department, Office of the Chief Signal Officer. Visual Signaling, Manual #6, Washington: GPO, 1910.

UJ200.22 H3U5 RARE War Department, United States Signal Service. Instructions for Using the Heliograph of the United States Signal Service, by R.E. Thompson, Washington, D.C: 1888. (11p) (Reprint of General Order #99, Nov 15, 1888).

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